

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTY.'S DOCKET: FABBRI=4

In re Application of:	)	Confirmation No.: 5356
	)	
Fabrizio FABBRI	)	Art Unit: 3746
	)	
Appln. No.: 10/777,627	)	Examiner: P. J. BERTHEAUD
	)	
Filing Date: February 13, 2004	)	May 24, 2010
	)	
For: HIGH PRESSURE PLUNGER PUMP)	)	

**REPLY BRIEF**

Honorable Commissioner for Patents  
U.S. Patent and Trademark Office  
Randolph Building, Mail Stop Appeal Brief - Patents  
401 Dulany Street  
Alexandria, VA 22314

Sir:

The present reply brief is responsive to the Examiner's Answer of March 22, 2010, and is in full compliance with 37 CFR §41.41.

**The Examiner's Indefiniteness Argument Is Inconsistent With and Ignores the Explicit and the Implicit Teachings of the Disclosure**

In item 2 of page 3 of the Examiner's Answer and in item 6 on page 4 of the final Office Action of March 17, 2010, the Examiner argues the valve seats can be interpreted as the portions of 77 and 83 that element 75 rest upon when not open and these are clearly not part of the single block. On page 6 of the Answer, the Examiner appears to agree that the term "valve" means whole valve or "valve assembly", and not merely the moveable part of the valve or the valve member, but he nonetheless argues that the rejection is warranted due

to the common interpretation in the art that a valve seat typically seats a moveable member of a valve assembly and given the alleged lack of clarification in the specification of what the valve seat actually consists of. The Examiner also contends that the specification fails to explicitly define the intake valve seats, and that, contrary to Appellant's arguments, the specification and drawings do not show or describe the valve seats as a unitary block, because there is no mention of unitary or valve seat and no description of the description stating that the intake valve seats are portions of this unitary block. Appellant respectfully traverses this rejection.

As discussed on pages 5 and 6 of Appellant's Appeal Brief, the MPEP at § 2173.02, clearly states:

The examiner's focus during examination of claims for compliance with the requirement for definiteness of 35 USC 112, second paragraph, is whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. When the examiner is satisfied that patentable subject matter is disclosed, and it is apparent to the examiner that the claims are directed to such patentable subject matter, he or she should allow claims which define the patentable subject matter with a reasonable degree of particularity and distinctness. Some latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the examiner might desire. [Emphasis added.]

MPEP § 2173.02 also clearly states:

Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

It is again respectfully submitted that the rejected language of “said cylinders being provided within a single block formed as a unit together with the seats of the intake valves” of independent claims 14 and 15 is clear and definite when read in light of the teachings in the disclosure and taken with the knowledge in the field. In this regard, the specification, at page 5, lines 14-21, discloses:

The intake valve 74 comprises a disc 75 maintained in position by the spring 76; the entire assembly is contained in a known cage 77 which maintains the disc sealing seat in position in accordance with a known construction.

The valve (assembly) is mounted through the cylinder 71, before inserting the plunger 6 therein.

The cage 77 is maintained in position by a cross-shaped elastic plate 78 inserted in the immediate vicinity of the cage (Figure 5). [Emphasis added.]

Based on this disclosure, the following should be clear. First, there are two deformable elements, namely the spring 76 which maintains the disc 75 in closed position, and the cross shaped elastic plate 78 inserted in the immediate vicinity of the cage 77. Second, the above mentioned passages on page 5 make it clear that there is a “valve assembly/unit” comprising all the components contained in the cage 77, and a valve member (the disc 75) resting on the valve seat for closure of the valve. In addition, it should also be noted that in Fig. 3, reference numeral 75 indicates both the disc and the valve seat (notice how reference numeral 75 points to two parts”), as would be readily apparent to the skilled artisan upon reading the disclosure.

The above-mentioned disclosure also makes it clear the valve is mounted through the cylinder 71 before inserting the plunger 6 therein. This shows the valve as being unitary (single block) with the cylinders. See also the description at the top of page 4, which

discloses that the object of the invention is attained by forming a compartment containing the intake valve as an extension of the respective cylinders, and communicating with the intake manifold positioned in front of the cylinder head, as also shown in Fig. 2. See also the disclosure at page 5, lines 10-13, which discloses that each cylinder 71 extends into a compartment 72 coaxial therewith to receive the intake valve 74, which compartment communicates via the intake conduit with the intake manifold, as also shown in Fig. 2. All of this means that the intake valve is the whole assembly and this is in turn formed as a single block with the cylinders, as called for in the claims. It also discloses that the cage 77 is maintained in position by a cross-shaped elastic plate 78 inserted in the immediate vicinity of the cage (Figure 5).

Therefore, it should be clear that the intake valve comprises a disc, and therefore, the disc is not the valve itself, and that the term "valve", as used in the disclosure and the claims, means the "valve assembly/unit" comprising the disc and the cage 77. Again, this is consistent with the disclosure and the drawing figures, as discussed above.

Yet, the rejection seems to be based on a misunderstanding in the rejection in which the term "valve" is referred to a "valve member", instead of to a "valve assembly/unit". While the terms "assembly" or "unit" may not be explicitly recited in the specification, such teaching is clearly implicit from the disclosure and the drawings, for the reasons discussed above. See again, the above-mentioned disclosure at page 5, that states "the intake valve 74 comprises a disc 75 maintained into position by a spring 76; ... the entire assembly is contained in a cage 77, ... the cage 77 is maintained in position by an ... elastic plate 78." As such, it should be understood that the term "intake valve" means whole assembly and this is in turn formed as a single block with the cylinders, as discussed in the specification and shown in Figures 2-3. Thus, the above-noted disclosure and drawings in the application

make it clear that the term “valve” cannot mean anything but “valve unit/assembly” (not the valve member alone), which is formed as single block with each cylinder.

While the Examiner under U.S. practice has the right to interpret words as broadly as possible, the Examiner’s reading of the intake valve 74 as only the disc 75 is inconsistent with the disclosure at page 5, lines 14-21, which should be understood to mean that the intake valve 74 includes the disc 75, the spring 76 and the cage 77, all maintained in position by the elastic plate 78.

For these reasons, the Examiner’s interpretation and position with respect to the claim elements is inaccurate and inconsistent with the disclosure. Again, the specification and drawings implicitly, if not explicitly, describe and support the feature that each cylinder is provided with a plunger and is connected via a conduit and valves to an intake manifold and to a delivery manifold, in which the cylinders being provided within a single block formed as a unit together with the seats of the intake valves and with said conduits and with said manifolds. As such, it is believed that the language in claims 14 and 15 is clear and definite. The arguments directed to independent claims 14 and 15 are applicable to dependent claims 2-6 and 9-13, all of which depend on either claim 14 or 15.

For these reasons, the indefiniteness rejection of claims 2-6 and 9-15 is untenable and should be reversed.

**Obviousness rejection of claims 2-4, 9-11, and 14-15 under 35 USC 103(a) over Elliott (US 4,618,316) in view of Redman (US 3,427,988).**

The primary inventive element of the claimed invention, as called for in independent claims 14 and 15, is the feature of the cylinders being provided within a single block formed as a unit together with the seats of the intake valves and with said conduits and

with said manifolds. Appellant respectfully submits that this feature is not disclosed or suggest in Redman or in Elliot, or in any combination thereof.

The Examiner takes the position that “. . . it would have been obvious . . . to have modified the assembly of Elliott by placing the inlet manifold in front of a line of cylinders as taught by Redman, in order to have the horizontal passage serve as both a cylinder bore as well as suction passage and to allow the inlet and discharge manifolds to receive and distribute fluid from much different locations on the pump assembly.”

Appellant again respectfully disagrees and submits that the proposed combination suggested by the Examiner makes no sense. By simply placing the inlet manifold in front of the cylinder in Elliott’s device, the only result would be to have horizontal passage of Elliott to serve as both the cylinder bore and a suction passage. Why would anyone skilled in the art make such a reconstruction of Elliott? There is simply no reason to do so, and moreover there is no advantage to be achieved by such a modification of Elliott. Further, even if the intake valve seat could be located in the same bore of the cylinder, instead of being located in the same bore of the delivery valve, such a reconstruction would not correspond to the subject matter of claims 14 and 15. It also could not be achieved according to the present invention because the valve has a diameter larger than the diameter of the cylinder bore.

Even if such a reconstruction, as suggested by the Examiner, could somehow be accomplished, respectfully denied, it would not result in the claimed subject matter. The problem of allowing the inlet and discharge manifolds to receive and distribute fluid from such different locations of the pump assembly would remain unsolved in such a reconstruction, because it does not depend on the location of the inlet manifold in Elliott.

By contrast, Appellant's main claims 14 and 15, and thus all of the claims on appeal, call for the feature of the inlet manifold and delivery manifold being provided in the same single block of the cylinder. This feature is not shown in and is nowhere suggested by the prior art. There is no reason given in the prior art for doing this.

Yet, the Examiner contends that there was a reason for making this change (respectfully denied), however, even if the idea of joining the two parts into a single part had even been thought of, although not shown, such a reconstruction of Elliott would not be possible without other important modifications not shown or suggested by the applied references, as discussed in the Appeal Brief and further below. Further, to form the single block as a unit further requires the diameter of the cylinder 19 to be larger than the diameter of the axial bore of the part 26 containing the exhaust valve, and the diameter of 26 to be larger than the diameter of the bore of the part 27 downstream from the exhaust valve.

It is respectfully submitted that the Examiner has failed to adequately address these arguments, especially with respect to the teaching away in Redman, other than to say (as on page 9 of the Examiner's Answer) that Appellant has submitted no evidence that the modification and combination of the elements required is uniquely challenging or difficult for one of ordinary skill in the art. However, Appellant disagrees because such evidence is readily apparent from the disclosed structural arrangement of the various elements and the overall design of the two prior art pumps, as disclosed in the references themselves. In particular, as discussed in the Appeal Brief, in Redman, there are seven separated parts that would need to be unified in a single block, but this is impossible because forming these parts as a unit in a single block would make it impossible to assemble the pump. For example, the three separate parts 26, 27 and 22, should these parts be realized as a single block, it would be impossible to insert and lock the valve member. The Examiner has not adequately addressed

this position. On page 8, the Examiner simply argues that it is not necessary that the prior art inventions be physically combinable to render the invention obvious, so long the combined teachings suggest the elements of the claims. However, as noted in the Appeal Brief, it is well established that a prior art reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). M.P.E.P., Eighth Ed., Rev. 6 (September 2007) at § 2141.02, VI. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959); M.P.E.P., Eighth Ed., Rev. 6 (September 2007) at § 2143.01, VI. Also, if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); M.P.E.P., Eighth Ed., Rev. 6 (September 2007) at § 2143.01, V. Again, in Redman, there are seven separate parts that would need to be unified in a single block, but this is impossible because forming these parts as a unit in a single block would make it impossible to insert and lock the valve member and it would make it impossible to assemble the pump, for the reasons discussed above. Thus, the proposed modification would certainly change the principle operation of Redman and/or render the reference inoperable for its intended purpose. This also goes against the very purpose of the claimed pump. For these reasons, it is believed that Redman teaches away from the concept of the claimed pump, and as such, Redman cannot be combined with Elliott to arrive at the subject matter of claims 14 and 15.



Appellant further disagrees with the Examiner's position that Elliot discloses providing cylinders within a single block of a valve, for the reasons of record, and it certainly does not show in a single block together with the seats of the intake valves and with the conduits and the manifolds, as required by the claims. Thus, it is again submitted that no combination of Elliott and Redman, even if they were combined, would arrive at each and every element of independent claims 14 and 15.

Another feature of main claims 14 and 15, which is not shown or made obvious by the references, either singly or in combination (even assuming the combination were obvious, *ad arguendo*), is the feature that the intake valve assembly is located in the inlet conduit and is retained in position by a deformable element. Again, when Appellant uses the word "valve", it means the whole valve or "valve assembly", not merely the movable part of the valve or the valve member. Please see the above discussion with respect to the traversal to the indefiniteness rejection. Please also see the specification at page 5, where the elastic member (elastic plate 78) maintains the cage 77 containing the valve assembly (see Fig. 3) in position. In both Elliott and Redman, the elastic means are the elements acting as usual on the valve member alone, and the entire valve, *i.e.*, the valve assembly, is retained in position by rigid means (not a deformable element), in Elliott by the tubular member 15 and in Redman by a bridge which is rigid with the body 26.

For these reasons, it should be clear that no combination of Elliott in view of Redman would arrive at each and every element of claims 14 and 15. Therefore, main claims 14 and 15 are believed to be novel and patentable over Elliott in view of Redman. The arguments with respect to the independent claims 14 and 15 apply to dependent claims 2-6 and 9-13 in view of their dependency on claims 14 and 15. Thus, dependent claims 2-6 and

9-13 are also believed to be novel and patentable over Elliott in view of Redman for the same reasons given their dependency on claims 14 and 15.

Reversal of the obviousness rejection of claims 2-4, 9-11, and 14-15 over Elliot in view of Redman is requested.

**Obviousness rejection of claims 2-5, 6, 12, and 13 under 35 USC 103(a) over Elliott (US 4,618,316) in view of Redman (US 3,427,988) and Hagler (US 3,306,214).**

The Examiner rejected claims 2-5, 6, 12, and 13 as being obvious under 35 U.S.C. 103(a) over Elliot in view of Redman and further in view of Hagler for the reasons set forth in item 9 on page 6. This rejection should fall, because the combination of Elliott, Redman, and Hagler fails to teach, suggest or make obvious all of the features of main claims 14 and 15, to which claims 2-5, 6, 12, and 13 depend, either directly or indirectly, for the same reasons set forth above with respect to the rejection over Elliott in view of Redman.

Further, Hagler fails to remedy the above-noted deficiencies of Elliott and Redman. Hagler was relied solely for disclosing the features of dependent claims 2-5, 6, 12, and 13, as Hagler does not disclose or suggest the elements of main claims 14 and 15. Therefore, no combination of Elliott, Redman, and Hagler would provide for each and every element of the claims.

Thus, reversal of the obviousness rejection of claims 2-5, 6, 12, and 13 over Elliot in view of Redman and Hagler is requested.

**CONCLUSION**

Having addressed all the outstanding issues, this paper is believed to be fully responsive to the Office Action. Applicants respectfully request reconsideration and

withdrawal of the outstanding rejection of record in view of the above amendment and remarks. It is believed that the claims are in condition for allowance. Favorable action is requested. If the Examiner has any comments or proposals for expediting allowance, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.  
Attorneys for Applicant(s)

By /jfw/  
Jay F. Williams  
Registration No. 48,036

JFW:pp:jhw  
Telephone No.: (202) 628-5197  
Facsimile No.: (202) 737-3528  
G:\BN\C\Corr\Fabbri4\Pto\2010-05-24ReplyBrief.doc